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Listing of Claims:

The following listing of claims replaces all prior versions and listings of claims in the application.

1. – 57. (Canceled)

58. (Currently Amended) A method for altering the glycosylation profile of a mature form of a polypeptide of interest, the method comprising:

a) preparing a nucleic acid comprising a nucleotide sequence encoding a peptide-extended polypeptide with the primary structure NH₂-X-Pp-COOH, wherein

NH₂ and COOH represent the N-terminus and the C-terminus of the peptide-extended polypeptide, respectively;

X is a peptide addition 1-30 consecutive amino acids in length, wherein X which comprises or contributes to an *in vivo* N-glycosylation site; and

Pp is the sequence of the mature form of the polypeptide of interest, wherein X and Pp are linked by a peptide linkage; and

b) expressing the nucleic acid in a glycosylating host cell to provide a peptide-extended glycosylated polypeptide;

wherein the peptide-extended glycosylated polypeptide exhibits an altered glycosylation pattern compared to that of the mature form of the polypeptide of interest when expressed under the same conditions.

59. (Currently Amended) The method of claim 58, further comprising:

—e)—recovering the peptide-extended glycosylated polypeptide.

60. (Canceled)

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61. (Previously Presented) The method of claim 60, wherein X is of the formula:

X₁'-N-X₂-[T/S]/C-Z wherein

X₁' is absent or comprises at least one amino acid;

X₂ is any one amino acid except proline;

Z is absent or comprises at least one amino acid;

N is asparagine; and

[T/S]/C is threonine, serine, or cysteine.

62. (Previously Presented) The method of claim 61, wherein X is of the formula:

X₁-(N-X₂-[T/S])-X₃-(N-X₂-[T/S])_n-X₄ wherein

X₁ is absent, or is any 1, 2, 3, or 4 amino acids;

X₂ is any one amino acid except proline;

X₃ is absent, or is any 1, 2, 3, or 4 amino acids;

X₄ is absent, or is any 1, 2, 3, or 4 amino acids;

n is an integer between 0 and 6; N is asparagine; and [T/S] is threonine or serine.

63. (Previously Presented) The method of claim 61, wherein

X₂ is isoleucine, alanine, glycine, valine, or serine.

64. (Previously Presented) The method of claim 58, wherein the glycosylating host cell is a fungal cell, an insect cell, a mammalian cell, or a plant cell.

65. (Currently Amended) The method of claim 5859, further comprising:

reacting-incubating the peptide-extended glycosylated polypeptide with a non-peptide moiety which differs from an oligosaccharide moiety, under conditions suitable to covalently attach at least one said non-peptide moiety to an attachment group of the polypeptide.

66.-72 (Canceled)